State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Northeast Region Headquarters
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May 29, 2014

IP-NE-2014-05-T01184

Jeremy Ashauer.
Wisconsin Department of Transportation
944 Vanderperren Way
Green Bay, WI 54304

Subject: Small Dam plan approval for Oneida Mitigation Bank Dam located in the non-navigable waters of an unnamed tributary to Trout Creek, Village of Hobart, Brown County. Dam Key Sequence No. 6164.

Dear Mr. Ashauer:

FINDINGS OF FACT

The Department of Natural Resources has examined the dam construction plans and calculations as submitted by Jeremy Ashauer of behalf of the Wisconsin Department of Transportation. The dam is located in the NW ¼ of Section 15 Township 24 North, Range 19 East, in the Village of Hobart, Brown County.

CONCLUSIONS OF LAW

The review has been conducted in accordance with Chapter 31 Wisconsin Statutes. The Department has determined that Chapter NR 333 is not applicable and the project complies with Section 1.11, Wisconsin Statutes, and Section 103, Wisconsin Administrative Code.

APPROVAL

The plans are adequate for a structure with the following characteristics:

Drainage area:	0.24 square miles
Structural height:	3.5 feet
Maximum storage capacity:	34.6 acre-ft.
Slopes of embankment:	10:1 upstream and downstream
Principle spillway:	12 in dia. Agri-Drain inline water control structure (0.9 cfs @ overtopping)
Planned pool elevation:	751.0 ft.
Length of Dam Embankment:	Approximately 1800 ft.
Embankment height:	753.0 ft.
Width of embankment crest:	14 ft.
Emergency overflow spillway:	50 foot wide @751.5
Total Spillway Capacity:	17.2 cfs @ overtopping

CONDITIONS

The plans are hereby approved subject to the following conditions:

1. Prior to beginning any construction activities, erosion control measures shall be in place. Erosion control measures shall be in accordance with WDNR Storm Water Management Technical Standards. Technical Standards are available on line @ http://dnr.wi.gov/topic/stormwater/standards/ .
2. Organic materials at the base of the proposed embankment shall be removed from the site prior to dam embankment construction. All organic native materials or excess construction materials shall be removed from the waterway and deposited in a suitable legal upland location. All waste materials must be legally disposed of.
3. Provide Record Drawings (as-builds) of the dam submitted under a PE's seal. Include on the drawings the location, elevation, and description of a permanent bench mark adjacent to the dam.
4. Upon completion of the work, digital photos shall be provided of the embankment and control structures. An identifying description/caption shall be provided for each photo.
5. The proposed embankment shall not cause any increase in surface water elevations to the adjacent property owners.
6. Provide a copy of the operation and maintenance (O & M) plan for the Oneida Mitigation Bank Site small dam. It is recommended to include within the O & M, a guide for the control and management of invasive phragmites.

Section 31.12(4), Wisconsin Statutes, requires a verified statement to be filed with the Department within 10 days after completion of the dam, stating that it was constructed in accordance with the approved plans. The statement shall say that construction was completed in accordance with the approved plans.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed.

To request a contested case hearing pursuant to section 227.42, Stats, you have 30 days after the decision is mailed or otherwise served by the Department to serve a petition for hearing on the Secretary of the Department of Natural Resources. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30 day period for filing a petition for judicial review.

This notice is provided pursuant to section 227.48(2), Stats.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By Miles A. Winkler Date Mailed 5/29/2014
Miles A. Winkler, P.E.
Water Management Engineer - NER

Cc. ✓ Michelle Lehner – WI DNR – Oshkosh
✓ Matthew Schaeve – WI DNR – Green Bay
✓ William Sturtevant – WI DNR – Madison, WT/3
✓ Crystal Von Holdt – WI DNR – Green Bay
✓ Jennifer Gibson – WI DOT – Green Bay
✓ Allyn Dannhoff – Village of Hobart

NEW DAM PLAN REVIEW CHECKLIST

For dams, embankments or other water retention structures

Dam Owner Name: Wisconsin Department of Transportation Home Phone: _____

Address: 944 Vanderperren Way, Green Bay, WI 54304 Work Phone: (920) 492-4165

- **Location Information** - A sketch or map that clearly indicates the location of the project. The map should include fire numbers or other landmarks that will enable staff to locate the project site. See Attachment A.
  Town 24 N, **Range** 19 (E)/W, **Section** 15, Q _____, QQ _____, QQQ _____
  Name of Dam: Oneida Wetland Mitigation Bank Dam **Name of Waterway:** Unnamed Tributary to Trout Creek

Name of Designer: Bill Schilling Agency/Firm : URS Corporation

Phone: (414) 831-4176 Fax: (414) 831-4101 email: bill.schilling@urs.com

Address: 342 N Water St, 7th Floor Milwaukee, WI 53202

The following information is required for review of dam plans. Please check all the information that is included in the submitted design package. Where a blank line has been provided, please insert the information for ease of entry into the database.

General Design Information

- Purpose of dam Impound runoff for wetland mitigation
- Drainage area (*square miles*) 0.24
- Planned pool elevation 751.0 ft Q_{100} water surface elevation 751.73 ft
- Normal pool surface area (*acres*) 36.9 Water surface area at maximum pool (*acres*) 39.05
- Normal storage (from bottom of impoundment to planned pool) (*acre-feet*) 15.7
- Maximum storage (from bottom of impoundment to point of overtopping) (*acre-feet*) 34.6
- Structural height (difference between design elevation and elevation of streambed at downstream toe) (*feet*) 3.5
- Hydraulic height (difference between normal pool elevation and tailwater elevation) (*feet*) 0.5
- Design storm frequency/duration (must meet minimum from appropriate standard) (*year*) 100 /(*hour*) 24
- Design discharge (reservoir routing may reduce peak spillway outflow) (*cfs*). 100 year 16.90
- Include hydrologic and hydraulic calculations with the submittal.

Outlet/Spillway Information

- Outlet structure type, dimensions, elevations, joint treatment, corrosion protection, shown on plans/specifications.
- Principle spillway capacity* (*cfs*) 0.9 Total spillway capacity* (*cfs*) 17.2

* calculated at point of embankment overtopping

- Auxiliary spillway location, elevations, bottom width, side slopes, materials, shown on plans/specifications
- Auxiliary spillway constructed in natural undisturbed soils or show stability/erosion analysis
- Are there drawdown facilities? Yes Is there access for gate operation? Yes
- Is there a trash rack? No Is there an anti-vortex device? No

Embankment Information

- ☐ Elevation (design elevation) of top of embankment (low point in embankment crest) 753.0 ft
- ☐ Elevation of stream bottom at downstream toe of embankment. 749.5 ft
- ☐ Length (ft) 1800 Top width (ft) 14 Side slopes (us) 10 : 1 (ds) 10 : 1 Fill volume (yd^3) 8800
- ☐ Embankment fill soil type, compaction method and maximum lift thickness shown on plans/specifications
- ☐ Foundation soil type and preparation shown on plans/specifications Loam
- ☐ Depth of peat at structure or center of dike (if applicable) N/A
- ☐ Seepage control measures (cutoff walls, toe drains, anti-seep collars, french drains, slurry trench, clay core)

Other Considerations

- ☐ Benchmark description for all elevations (include one on dam and one off dam benchmark location)
- ☐ Description of construction sequence (coffer dams, water diversion, etc.)
- ☐ Description/plan of construction erosion protection measures.
- ☐ Description of post-construction scour protection at outlet structures and on embankments
- ☐ Clearing and grubbing plan for impoundment area (if necessary)
- ☐ Will normal pond surface flow lands not owned by the applicant? Yes* (No)
- ☐ Will embankment affect floodplain on adjacent property (increase >= 0.01' off owner property)? Yes* (No)
- * If yes, must have secured appropriate flowage/flooding easement or have affected property owner(s) as co-applicant(s)
- ☐ Will embankment affect floodplain elevation in adjacent watershed during 100-year event? Yes* (No)
- * Prepare encroachment analysis and secured appropriate flooding easement from affected property owner(s)
- ☐ Projected minimum flows and water quality of discharge (if applicable)
- ☐ Warning signs and portage route locations if necessary (structures on navigable waterway with permanent pool)
- ☐ Request for waivers and waiver from design standard criteria included

Additional information required for large dams (must comply with all requirements of NR 333) N/A

- ☐ Stamp indicating preparation by a Wisconsin registered P.E.
- ☐ Regional flood flows calculated per NR116.07 (3)
- ☐ Determination of floodplain boundary with and without dam per NR116.07(4)
- ☐ Stability analysis (for embankment with side slopes steeper than 2.5/1 and spillway structures, other than culverts)
- ☐ Identification of hydraulic shadow and calculations for dam break analysis per NR 333 and NR 116
- ☐ Dam hazard rating determined per NR333.06
- ☐ Operation, Inspection and Maintenance Plan and Emergency Action Plan
- ☐ Cost estimate for construction.

Signature (individual preparing form): _____ **Date:** 9/17/14

For DNR use only
Docket Number: **Financial Responsibility Consideration:**